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1997

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# BUREAU OF SHIPS GROUP TECHNICAL INSPECTION REPORT.

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Classification (Generalized) (Change to CONFIDENTIAL)  
By Authority of Joint Chiefs of Staff (Action 15 Apr 48)

John D. Blahey CDR Date 24 April 51

AES NP

36744

⑥ OPERATION CROSSROADS.  
U.S.S. PILOTFISH (SS386).

TEST BAKER ⑦ ⑧

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ARMED FORCES  
SPECIAL WEAPONS PROJECT

⑨ Bureau of Ships group technical inspection rpt.

⑩ C. L. Gaasterland.

⑪ 1947

⑫ 16 p.

⑬ XRD-117

OPERATION CROSSROADS

DIRECTOR OF SHIP MATERIAL

JOINT TASK FORCE ONE ISM



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REG. NO. 3

GROUP 3 1 JAN 1965  
Downgraded at 1 year intervals;  
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BUREAU OF SHIPS GROUP  
TECHNICAL INSPECTION REPORT

Classification (Cancelled) (Changed to **CONFIDENTIAL**)

By Authority of Joint Chiefs of Staff (Action 15 Apr 49)

*John Beale (Act)* Date *27 April 51*

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Washington, D. C. 20301

SUBMITTED:

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**CONFIDENTIAL**, Captain, U.S.N.

USS PILOTFISH (SS386)

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U.S.S. PILOTFISH (SS386)

SHIP CHARACTERISTICS

Building Yard: Portsmouth Naval Shipyard.

Commissioned: 16 December 1943.

HULL

Heavy Hull Construction.

Length Overall: 311 feet 9 inches.

Length (between perpendiculars): 307 feet 0 inches.

Beam (extreme): 27 feet 3 inches.

Beam (molded): 27 feet 1 3/4 inches.

Drafts (at time of test): Submerged.

Standard Displacement: 1525 tons.

Displacement (at time of test): 2405 tons.

MAIN PROPULSION PLANT

Main Engines: Four Fairbanks-Morse, 10 cylinder,  
Type 38D8.

Auxiliary Engine: Fairbanks-Morse, 7 cylinder,  
Type 38D5.

Main Motors and Generators: Elliott.

Main Storage Battery: Exide.

Main Controls: Westinghouse.

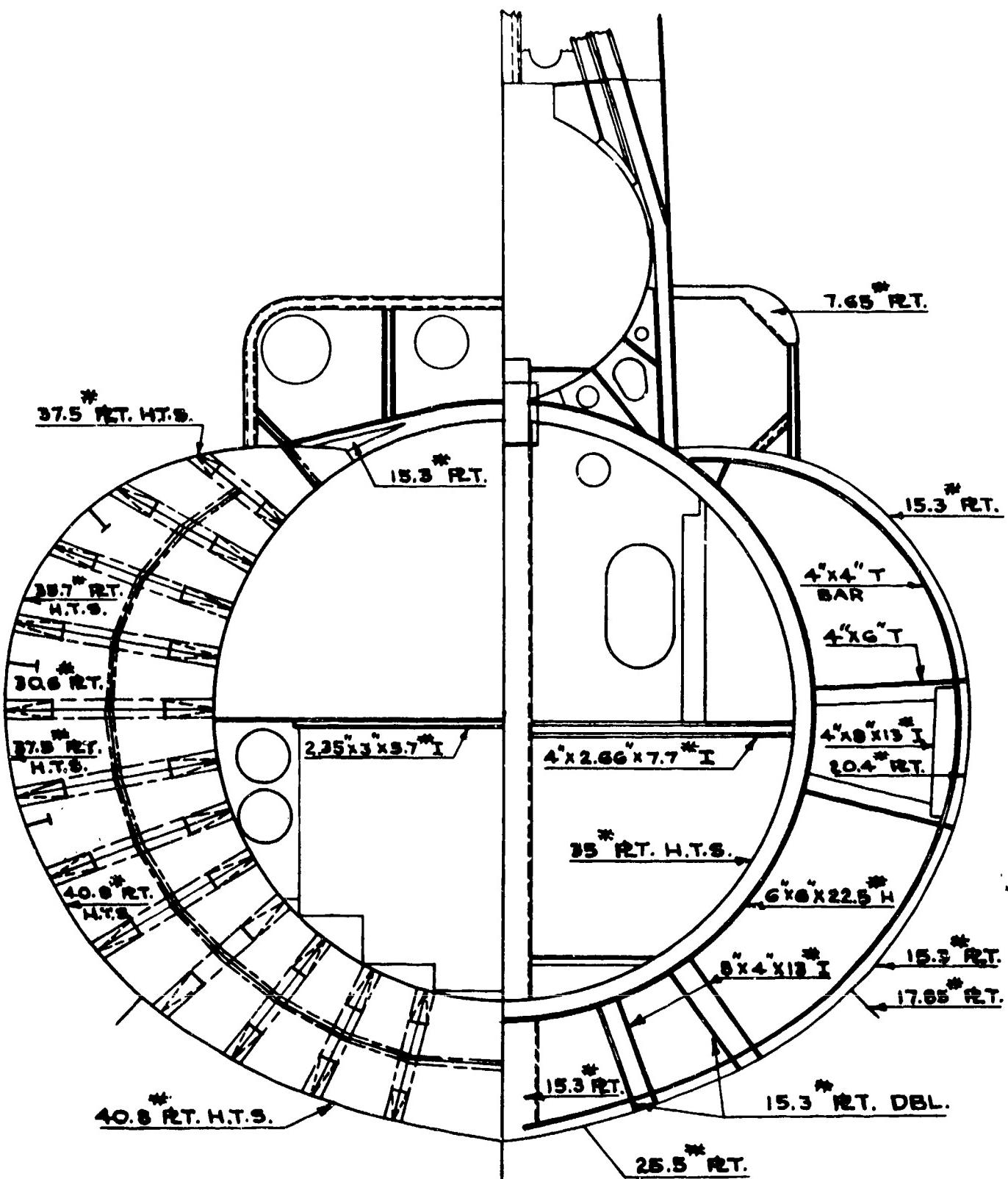
Reduction Gears: Westinghouse.

Diesel Electric Drive.

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TYPICAL SECT. AT FR. 69  
LOOKING AFT

TYPICAL SECT. AT FR. 53  
LOOKING FORD.

TEST B

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## TECHNICAL INSPECTION REPORT

### OVERALL SUMMARY

#### I. Target Condition After Test.

##### (a) Drafts after test; list; general areas of flooding, sources.

Ship is resting on bottom with an indeterminate amount of flooding. The hull is covered to about three quarters height with silt and coral.

##### (b) Structural damage.

In way of the after torpedo room the plating between frames is dished to a depth of about six inches. The superstructure and tank tops are dished in several locations and the superstructure plating has numerous tears and holes. See photograph on page 9. Complete examination is not possible. Superstructure has shifted to starboard about six inches amidships and one inch at the stern. This shift makes salvage connections inaccessible unless part of the deck is cut away.

##### (c) Other damage.

Unknown.

#### II. Forces Evidenced and Effects Noted.

##### (a) Heat.

No evidence.

##### (b) Fires and explosions.

No evidence.

##### (c) Shock.

Unknown.

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(d) Pressure.

The "Coordinator's Report on Air Blast and Water Shock for tests Able and Baker" of 27 September indicates that the peak water pressures were over 7000 lbs. per square inch.

III. Results of Test on Target.

(a) Effect on propulsion and ship control.

Unknown.

(b) Effect on gunnery and fire control.

Unknown.

(c) Effect on watertight integrity and stability.

Unknown.

(d) Effect on personnel and habitability.

Unknown.

(e) Total effect on fighting efficiency.

Unknown.

IV. General Summary of Observer's Impressions and Conclusions.

The PILOTFISH was submerged for test Baker in 28 fathoms of water to a keel depth of approximately 56 feet, at a range of approximately 300 yards from the center of the burst. After test Baker she was found on the bottom with a starboard list of approximately 30 - 40 degrees. The deck is covered with silt to a depth of 3 - 18 inches. A few pieces of loose coral are resting on the deck. All information has been obtained from exploratory divers' reports. No further information is available. Based on damage observed by divers on SKIPJACK and APOGON, which were farther from the blast, it is considered likely

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USS PILOTFISH (SS386)

that all or nearly all compartments are flooded and that the tops of the ballast tanks are no longer tight. It is believed that a comparatively lengthy operation would be required to salvage this ship. See the photographic Section pages 9 to 16 for views of portions of the deck and superstructure taken by underwater photography.

V. Preliminary Recommendations.

None.

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PHOTOGRAPHS

TEST BAKER

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S-36-9. Section near after escape hatch showing caved-in decking and crack running thwartships from salvage fitting to edge of deck.

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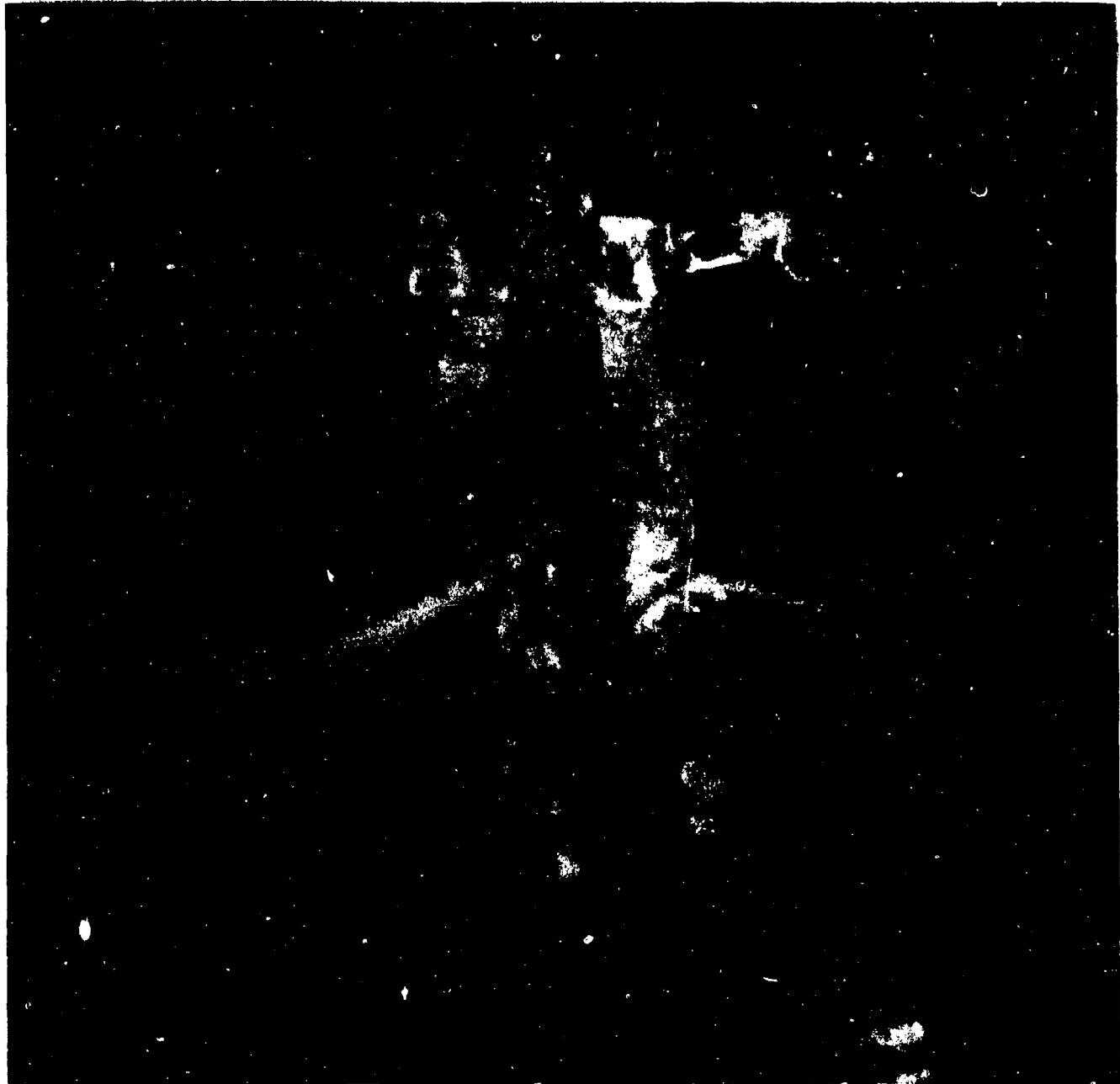
S-36-8. Plating at edge of deck looking aft showing angle of submarine relative to ocean floor.

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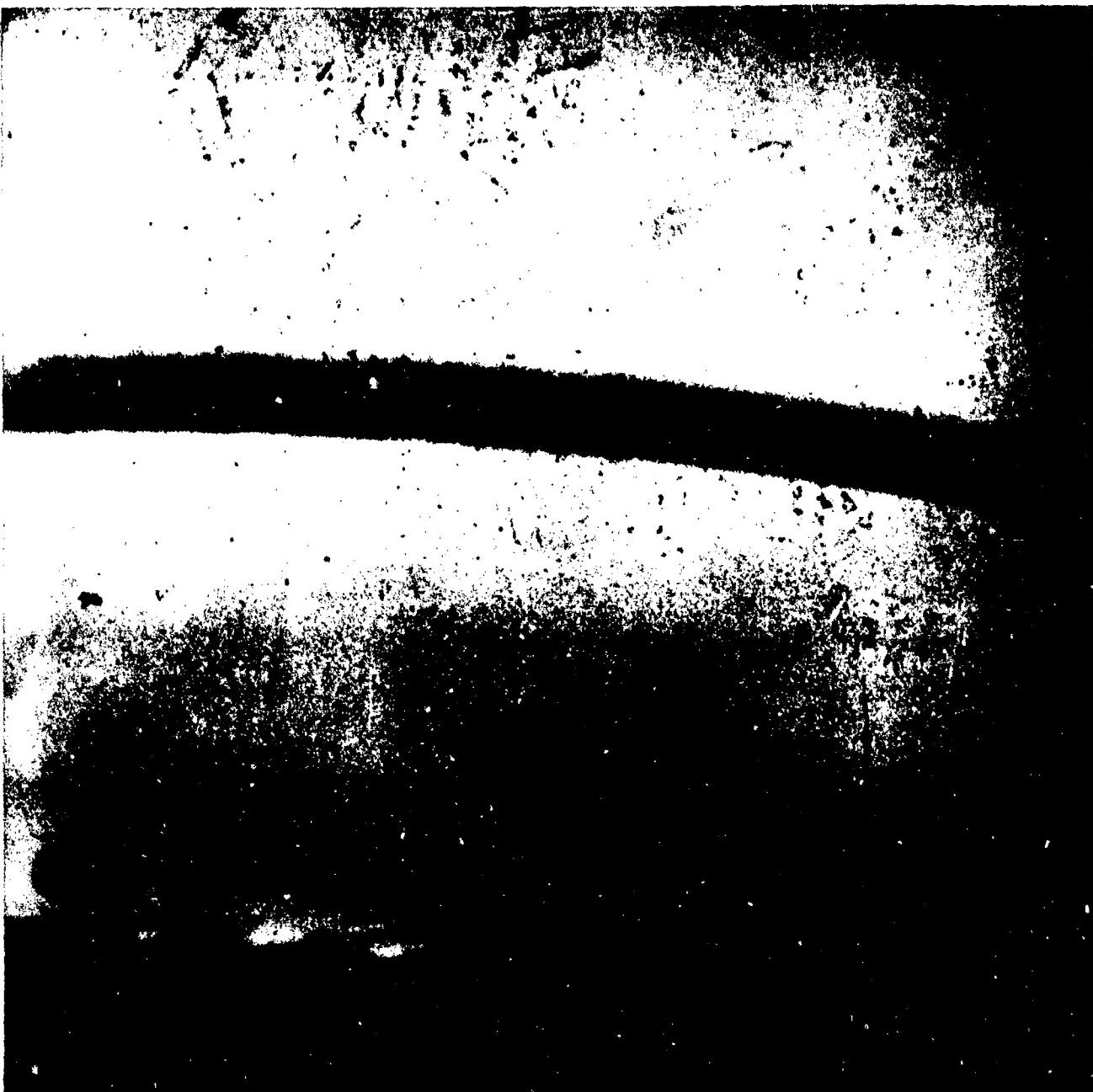
S-39-7. Cleat and line beside former position of salvage fittings just forward of conning tower.

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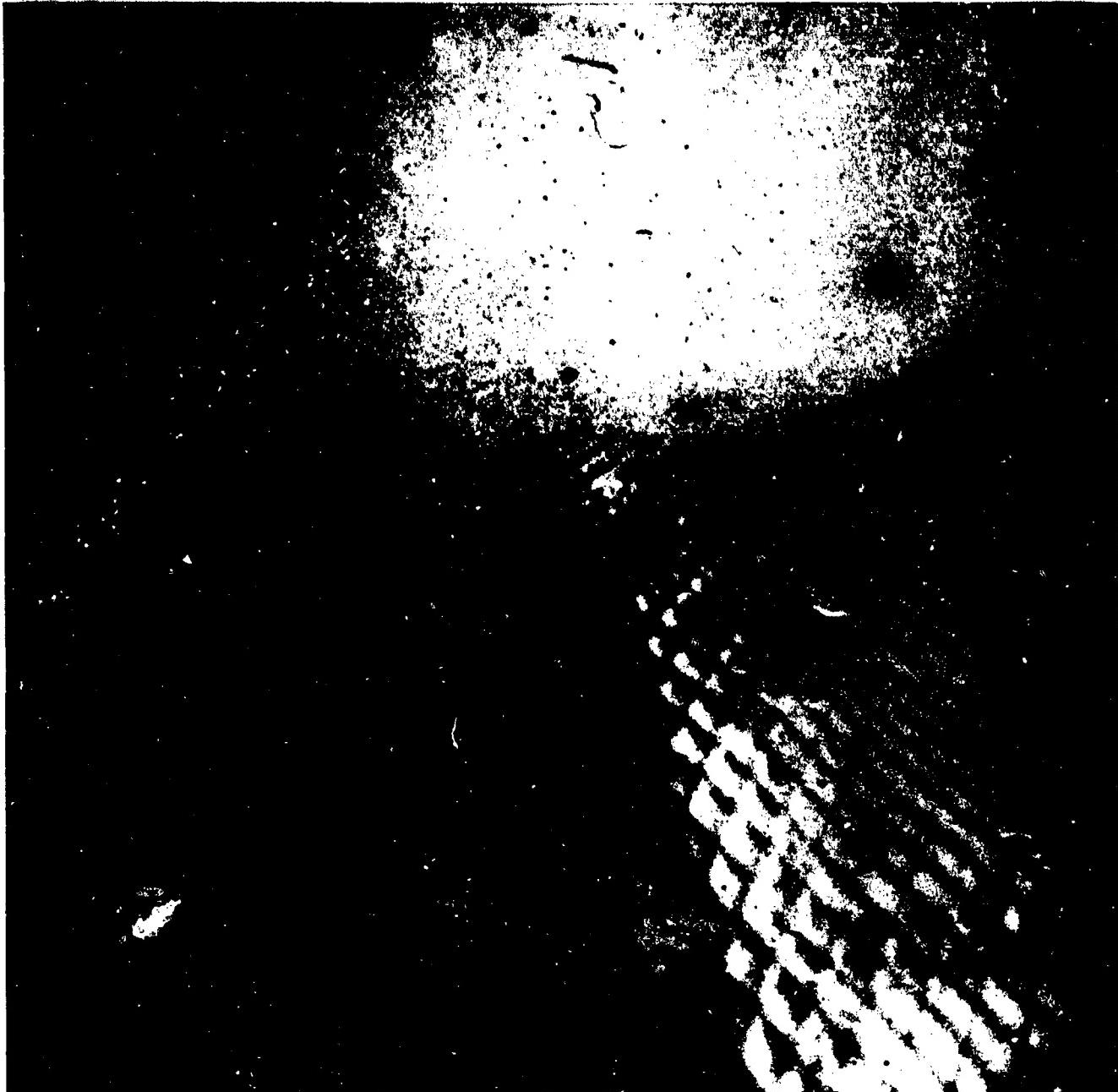
S-39-5. Port side vicinity frame #46 looking thru railing of bridge deck at gun point.

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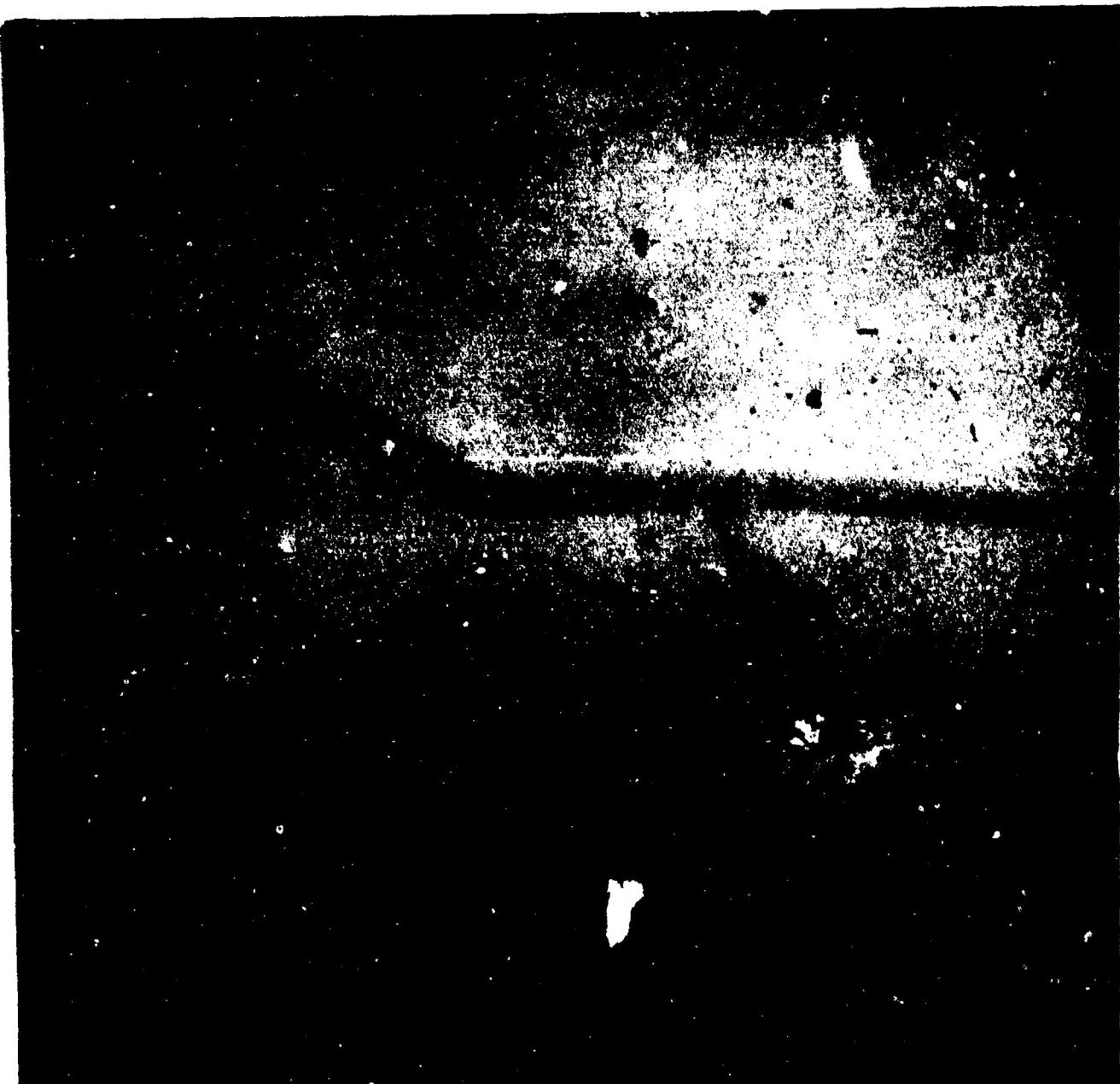
S-39-10. Forward portion of bridge showing netting and amplifier.

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S-39-20. Railing of bridge aft.

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S-36-14. Athwartships crack near after capstan. Note intact salvage fittings.

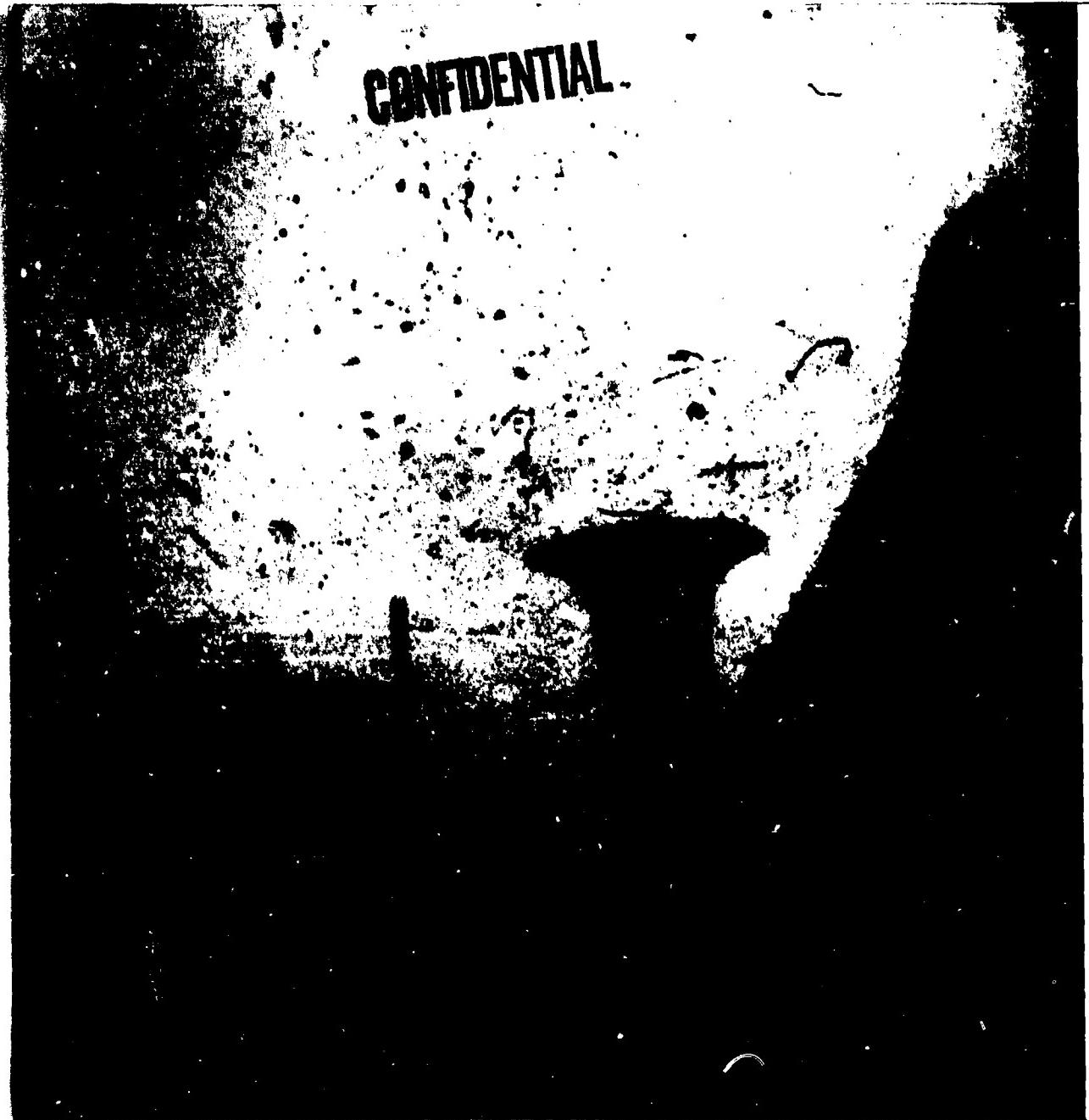
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S-39-16. Front of conning tower.



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**Defense Special Weapons Agency**  
6801 Telegraph Road  
Alexandria, Virginia 22310-3398

TRC

18 April 1997

MEMORANDUM FOR DEFENSE TECHNICAL INFORMATION CENTER  
ATTENTION: OMI/Mr. William Bush (Security)

SUBJECT: Declassification of Reports

The Defense Special Weapons Agency has declassified the following reports:

✓AD-366588 <del>4</del>	XRD-203-Section 12✓
AD-366589 <del>L</del>	XRD-200-Section 9
AD-366590 <del>L</del>	XRD-204-Section 13
AD-366591 <del>L</del>	XRD-183
✓AD-366586 <del>4</del>	XRD-201-Section 10✓
✓AD-367487 <del>LX</del>	XRD-131-Volume 2✓
✓AD-367516 <del>4</del>	XRD- <del>3</del> 143✓
✓AD-367493 <del>4</del>	XRD-142✓
AD-801410L✓	XRD-138
AD-376831L✓	XRD-83
AD-366759 <del>L</del>	XRD-80
✓AD-376830L <del>4</del>	XRD-79✓
✓AD-376828L <del>X</del>	XRD-76✓
✓AD-367464 <del>.X</del>	XRD-106✓
AD-801404L✓	XRD-105-Volume 1
✓AD-367459 <del>X</del>	XRD-100✓

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18 April 1997

Subject: Declassification of Reports

✓ AD-367491 ✗	XRD-134-Volume 2 ✓
✓ AD-367479 ✗	XRD-123 ✓
✓ AD-367478 ✗	XRD-122 ✓
✓ AD-367481 ✗	XRD-125 ✓
AD-367500 ✓	XRD-159-Volume 2 <i>maget</i>
✓ AD-367499 ✗	XRD-160-Volume 3 ✓
✓ AD-367498 ✗	XRD-161-Volume 4 ✓
AD-367512 ✓	XRD-147
AD-367511 ✓	XRD-148
✓ AD-367465 ✗	XRD-107 ✓
AD-366733 ✓	XRD-43
✓ AD-367477 ✗	XRD-121 ✓
✓ AD-367476 ✗	XRD-120 ✓
✓ AD-367467 ✗	XRD-109-Volume 1 ✓
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AD-367473 ✗	XRD-117 ✓
AD-367472 ✗	XRD-116 ✓
AD-367471 ✗	XRD-115 ✓
AD-367466 ✗	XRD-108 ✓
AD-801405L ✓	XRD-113
AD-367470 ✗	XRD-112 ✓
AD-367469 ✗	XRD-111 ✓

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18 April 1997

Subject: Declassification of Reports

AD-801406L ✓ XRD-114.

In addition, all of the cited reports are now **approved for public release; distribution statement "A" now applies.**

*Ardith Jarrett*  
ARDITH JARRETT  
Chief, Technical Resource Center